

Departmental Mentoring and Career Development Plan

Department of Pediatrics

Medical University of South Carolina

2012

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Introduction

The Department of Pediatrics believes that faculty development and mentoring are seen as essential to the core missions of the department. Mentoring is important in faculty retention, self- efficacy, and career success. Studies support the benefits to the mentees and the mentors. The development of a departmental mentoring program was spawned in 2009 with the formation of a Faculty Development Initiative. The Best Practices and recommendations for Departmental Mentoring and Career Development Plans for Faculty developed by the MUSC Mentor council (August 2010) and the Consultation by Mitchell Feldman, MD as a Visiting Professor in September, 2010 provided the foundation for the Pediatric Departmental Mentoring Plans.

The data derived from a survey of the Pediatric faculty in 2010 reported by Thomas Hulsey, PhD, seemed to indicate a complex environment within the Department that has a very collegial faculty but who have not fully or formally addressed mentoring and advancement among the faculty. There were pockets of positive experiences, but there was a pervading theme that mentoring was all too often absent and not always positive (due to a lack of a formal mentoring plan). While assistant professors appeared to have a better understanding of advancement, those at the associate level seemed to have been left to their own resources. Among the tracks, clinician educators, in particular, seemed to have less experience with mentoring and guidance for future advancement.

It would appear that a formal mentoring program – along with formal guidance for faculty development – is critical to improving these findings. (see Appendix 4)

1. Departmental Goals on Mentoring

The goal is for all faculty of the department to achieve their individual full potential as members of the College of Medicine and Medical University of South Carolina and to be rewarded for that achievement. The goals are to support the faculty in the development of their academic careers to achieve work satisfaction, academic achievement and promotion, and long term success. Since the University is a place where everyone is learning, it is vital that each member of the faculty see tangible evidence of that professional growth, as measured in the domains of writing papers for publication, writing and receiving grants, preparing and presenting lectures, integrating teaching for students, residents, fellows and colleagues, mentoring young investigators and junior faculty, or developing clinical expertise by specializing in some area of clinical medicine. It is incumbent on faculty members, their mentors, Department Chairs, and the university leadership to see that tangible progress is being made and documented. This mentoring plan is designed to assist in this process.

2. Description of the Promotion and Tenure Process in the Department of Pediatrics

The Department of Pediatrics has 3 tracks and 4 ranks:

- Academic Investigator
- Academic Clinician
- Clinician Educator

The 4 ranks include:

- Instructor
- Assistant Professor
- Associate Professor
- Full Professor

The promotion and tenure process is an ongoing, continuous process addressed by the Division Chief with career goal setting, academic year planning with the faculty members. The attached criteria for promotion and tenure are reviewed and assessed by the Division Chief and faculty member to quantitate and evaluate the quality of the achievements. The Division Chief submits the recommendation for promotion to the Pediatric P&T Committee Chair and the Department Chair for eligibility and likelihood of success for promotion. If the faculty applicant is eligible for promotion, the process follows the guidelines as recommended by the MUSC Faculty Promotion and Tenure Committee. The full document with all the guidelines is found at the link below:

<http://academicdepartments.musc.edu/com/faculty/apt/musc/index.html>

Documentation of Career Development

In order to achieve promotion and tenure, the professional growth of the faculty member must be documented. In addition to an up-to-date curriculum vitae in the format required by the College in which our Department resides, (*formatted curriculum vitae is attached to the document as **Appendix 7** in the web site above*) portfolios of research, teaching, and clinical accomplishments are important to develop and keep updated as faculty members progress through the academic ranks. ***To advance through the academic ranks, the quality of individual scholarship is of critical importance***, but depending on the track, more emphasis will need to be placed on a specific portfolio e.g., for academic investigators, the research portfolio is most important, whereas for a faculty member in the clinician educator track, the teaching portfolio is of also of major importance. The typical components of each of these portfolios include but are not limited to the following:

Academic Investigator Portfolio

1. Completion of educational requirements necessary for a career in academic research
2. First authored original publications (with impact factor information if possible)

3. Senior authored original publications (indicate whether the first author was someone the faculty member mentored)
4. Co-authored original publications
5. Other publications, e.g., review papers, book chapters, textbooks
6. Career training grant awards
7. Independent grant awards as PI
8. Grant awards as Co-investigator
9. Presentations of research at national / international meetings
10. Peer recognition for research activities including invitations to present at national / international meetings and other universities
11. National recognition as evidenced by election to specialty societies, editorial boards, service on national committees, NIH study sections, grant review panels of other funding agencies
12. Institutional or external research awards
13. Mentoring achievements: individuals mentored, achievements of mentees including grants received and important publications of mentees under your guidance, and where mentees are today
14. Membership and involvement in professional and scientific organizations
15. Contributions to research-oriented committees at department, college, university, community, state, regional, national and international levels
16. Leadership roles in research in appropriate department, college, or university

Clinician Educator Portfolio – strongly recommended

A teaching portfolio includes documents and materials that show the scope, quality, and creativity of faculty members' teaching efforts, progress, and achievements. Reflection is an integral part of the portfolio and shows how faculty members have integrated new learning with their teaching philosophy and performance. The reflection -in-action involves looking to our experiences while "thinking on our feet" during the experience; and reflection – on-action is done later after the encounter allowing the learner to spend time exploring why the action was done and how it affected the learning process. (reference: Donald Schon 1983 The reflective practitioner)

The typical components of a teaching portfolio include the following:

1. Completion of educational requirements necessary for career in academic teaching
2. Philosophy of teaching and learning
3. Teaching goals for student accomplishment
4. Teaching methods and evaluation strategies
5. Participation in course and/or curriculum development
6. Engagement in the scholarship of teaching and learning (SoTL)
7. Evidence of teaching accomplishments
 - a. Description of types of different teaching activities such as formal courses, small group seminars, one-on one tutorials, supervision of student research projects, chairing thesis or doctoral committees, and coaching manuscript preparation for students, residents, and fellows
 - b. Course materials (syllabi, readings, handouts, assignments, examinations)
 - c. Samples of teaching innovation (simulation, educational technology)
 - d. Samples of manuscripts related to teaching and or educational activities
 - e. Student, resident and fellow evaluations of teaching
 - f. Peer evaluations of teaching
 - g. Audience evaluations of presentations at state or national meetings
 - h. Membership in departmental, college, university, society, community, state, regional, national and international committees or organizations related to teaching
 - i. First authored publications (papers, chapters, reviews, textbooks) related to teaching
 - j. Senior authored publications (papers, chapters, reviews, textbooks) related to teaching
 - k. Co- authored publications (papers, chapters, reviews, textbooks) related to teaching
 - l. Grant awards related to teaching
 - m. Presentations on teaching at national / international meetings
 - n. Leadership roles in teaching in appropriate department, college, or university
 - o. Honors and awards for teaching

8. Mentoring achievements in teaching: individuals mentored, achievements of mentees in teaching arena, and where mentees are today
9. Reflections on teaching and clinical experiences that were formative to the faculty member.

Academic Clinician Portfolio

1. Completion of educational requirements necessary for career as an academic clinician, including certification by appropriate specialty board
2. Evidence of a heavy clinical load
3. Evidence of excellence in high quality patient care
4. Development of innovative clinic practices i.e., new clinical services that the faculty member established or participated in e.g., telemedicine, deep sedation protocols, obesity interventions, sports medicine, etc.
5. Evidence of organization of clinical services to provide an optimal setting for medical education and a data base for research
6. Evidence of excellence in clinical training of students, residents, fellows
7. Documentation of teaching activities including formal lectures, grand rounds, and continuing medical education
8. Superior evaluations of teaching by students, residents, fellows, peers, course directors and department chairs
9. First authored publications (papers, chapters, reviews, textbooks)
10. Senior authored publications (papers, chapters, reviews, textbooks)
11. Co-authored publications (papers, chapters, reviews, textbooks)
12. Presentations at national or international meetings
13. Peer recognition for clinical activities including invitations to present at national / international meetings and other universities
14. Co-investigator on research grant awards
16. Mentoring achievements: clinicians trained, achievements of trainees, and where trainees are today
17. Membership and involvement in professional and scientific organizations
18. Contributions to clinically oriented committees at department, college, university, community, state, regional, national and international levels
19. Leadership roles in clinical activities in appropriate department, college or university

Medical University of South Carolina Promotion and Tenure Guidelines

V-D - Criteria Matrix Ranks and Tracks

R=Required S=Suggested

<i>Under exceptional circumstances, promotions may be recommended when the candidate does not meet all of the basic criteria. These will be unusual</i>			
Professor	Academic Investigator	Academic Clinician	Clinician Educator
Continues to meet all the criteria for Associate Professor with major accomplishments in research, teaching, and/or clinical service	R	R	R
Distinguished career exemplifying scholarship. Excellence & productivity in research, outstanding success as a teacher, and/or outstanding service contributions are required. Involved in teaching activities, including formal lectures, grand rounds, and/or continuing medical education. (Leadership in Inter-professional teaching and interdisciplinary	R	R	R
Principal investigator on significant research grants	R	S	
Co-investigator on research grants.		R	
Direct involvement in research.	R	R	R
Key individual in training of students, post-graduates and mentorship of junior faculty	R	R	R
Serves as Course Director for one or more major courses			
Continues to carry a heavy clinical or teaching load			R
Continued publication of reviews, chapters, textbooks, peer reviewed papers, and/or innovative teaching materials (new curricula, educational programs, syllabi, video materials, computer programs, etc.) that influence the science and practice of medicine at the regional & national levels	R	R	R
Continued publication of important and original clinical and/or laboratory investigations with significant authorship.	R	R	
Publications with significant authorship since promotion to Associate Professor (line 1), and in total (line 2)	≥10 ≥30	≥10 ≥30	
Publications with authorship since promotion to Associate Professor (line 1), and in total (line 2)			≥5 ≥10
National recognition, as evidenced by election to generalist or specialty societies, service on national committees, study sections, editorial boards, visiting professorships, and/or invitations to speak in CME courses.	R	R	R
Leadership roles in appropriate department, hospital and college		R	R

Associate Professor	Academic Investigator	Academic Clinician	Clinician Educator
Continues to meet all the criteria for Assistant Professor with a record of achievement in research, teaching, and/or clinical service. (Participation in inter-professional teaching and inter-disciplinary research	R	R	R
Record of excellence in high quality patient care, teaching and/or research	R	R	R
Established independent investigator with major impact in planning/development of research project. Involved in teaching activities, including formal lectures, grand rounds, and/or continuing medical education.	R	R	
Principal investigator on significant research grants	R	S	
Co-investigator on research grants.		R	
Local, regional or national grant support for independent research or development of teaching methods, or health care delivery methods, or clinical care systems			S
Peer recognition for research activities including invitations to present work at other universities, workshops and scientific conferences.	R	R	
Direct involvement in research.	R	R	R
Organization of clinical services to provide a setting for medical education and a data base for clinical research.			R
Active in training of students and/or post-graduates.	R	R	R
Serves as Course Director for one or more major professional courses			
Important contributor to course development or course direction.			S
Superior evaluations of teaching by students, residents, peers, course directors, dept. chairs.	S	S	R
Nominated for or recipient of teaching awards.			S
Presentations at national/international meetings.	R	R	R
Continued publication of reviews, chapters, textbooks, peer reviewed papers, and/or innovative teaching materials (new curricula, educational programs, syllabi, video materials, computer programs, etc.) that influence the science and practice of medicine at the regional & national levels	R	R	R
Continued publication of important and original clinical and/or laboratory investigations with significant authorship.	R	R	
Total publications with significant authorship since last promotion	≥10	≥10	
Total publications with authorship since last promotion			≥5
Development of new teaching materials, such as curricula, educational programs, textbooks, syllabi, computer programs and video tapes			R
Established reputation inside and outside local institution as an authority in a clinical specialty or for leadership in primary care		S	R
Contributions to committees at department, college, university, community, state, regional, national and international levels	R Univ Level	R State Level	R State Level
Leadership role in department and hospital as a section or division head, or program director		S	S
Active involvement in local and national professional organizations	R 10	R	R
Election to scientific organizations in discipline.	S	S	S

Assistant Professor	Academic Investigator	Academic Clinician	Clinician Educator
Clear commitment to an academic career in research, teaching and/or clinical care.	R	R	R
Commitment to and potential for performing independent laboratory and/or clinical	R	R	
Receipt, active pursuit or development of the skills necessary to apply for local, regional and national grants.	R	R	
Developing skills for directing or contributing to publications related to research, teaching and/or clinical care. (Participation in interprofessional teaching and inter-disciplinary research encouraged)	R	R	R
Active in training of students and/or post-graduates.	R	R	R
Strong interest in teaching .			
Contributions as first author on refereed publications.	R	S	
Contributions as author on refereed publications.		R	S
Capable of managing most clinical problems in the appropriate discipline, but may seek assistance from senior faculty when dealing with complex		R	R
Carry a heavy clinical load			R
Establishing recognition through candidacy or membership in appropriate professional and scientific organizations.	R	R	R
Instructor	Academic Investigator	Academic Clinician	Clinician Educator
Completion of educational requirements necessary to enter a career in academic research, teaching and/or clinical care.	R	R	R
Aptitude for an academic career based upon recommendations of mentors.	R	R	R
Career goal to function independently in an academic environment as an investigator, teacher, and/or clinician.	R	R	R
Developing experience with preparation of research protocols and grant applications.	R	R	
Demonstrated interest in teaching.	R	R	R
Early experience with preparation of publications and presentations related to research.	R	R	
Fulfilled educational requirements for certification by appropriate specialty board.		R	R
Demonstrated interest in high quality clinical care.			R

3. Resources Available for Faculty Development

Protected time for research or teaching is individually negotiated by the Division Chief and faculty member. This is dependent on the track and resources of the division and the ability to garner salary support and departmental support.

Personnel support for administrative assistants, research nurses, nurse practitioners, laboratory technicians is dependent on the track of the faculty member, the division/departmental resources, and the faculty member's demonstrated productivity.

Departmental start-up funds are available, through the Department of Pediatrics, the COM for project development, and the CTSA for clinical projects. Grant opportunities are announced and promoted regularly for the faculty to make application for project funding. The department has expertise in grant development ("pre-award" group) for interested faculty. This may require collaboration with other divisions or departments in the COM or outside of MUSC.

Excellent resources for statistical support are available in the Division of Epidemiology. Thomas Hulsey and colleagues are available to offer help and recommendations for further analysis.

Laboratory facilities for basic science projects are available and require negotiation between the individual faculty member, the Division Chief, the Department Chair and the Director of the Children's Research Institute.

Funds for travel to scientific meetings, purchase of books, journals and software are available at the departmental and divisional level for all faculty members.

In addition to the department's resources, a detailed list of institutional and state and national resources for supporting clinical and translational research, basic science research, and education are provided in Appendix 5.

It is also important for all faculty to be aware of two important faculty groups on campus that serve important organizational, support and advocacy roles for faculty:

The Faculty Senate support: One of the important roles of the Faculty Senate is sponsorship of the New Faculty Orientation Program. This is a biannual event that includes a general welcome from key leaders at MUSC and breakout sessions detailing clinical, research, and teaching resources specific to MUSC. The Faculty Senate also provides Town Hall Meetings and Workshops several times a year to update the faculty on University Initiatives, Tenure and Promotion, and other relevant topics.

The Women Scholars Initiative (WSI) is a joint initiative of the Office of Academic Affairs and the Office of the President with a long-term goal of promoting careers of women faculty. This organization provides a monthly workshop series (recent topics include promotion and tenure, work/life balance, contract negotiation, financial planning, and establishing good mentoring relationships). Other events sponsored by the WSI include the annual Eminent Scholar Seminar and Award, which brings an eminent scientist to MUSC to talk about his/her work and visit with MUSC faculty members. Past Eminent Scholars include members of the National Academy of Sciences and the Howard Hughes Medical Institute. WSI sponsors the John R. Raymond Fellowship, an annual award made to a junior faculty member to be used towards building collaboration with a renowned expert (male or female) in her field. WSI also sponsors a number of peer mentoring events and roundtables. WSI events are open to all MUSC faculty. Learn more at <http://academicDepartments.musc.edu/womenscholars/index.htm>

4. Mentoring Program and Role of the Mentoring Champion

The Department Chair will assign a faculty member who is knowledgeable, experienced and passionate about mentoring as the **Mentoring Champion** for the Pediatric Department. The mentoring champion will design and implement a Departmental mentoring program based on the department's resources and needs of the faculty. The program will serve as a framework to promote successful mentee-mentor partnerships throughout the Department. The Mentoring Champion will network with mentor champions in other departments and the Chair of the Mentor Leadership Council to enhance mentoring programs across campus. Some level of salary support for departmental mentoring champions should be considered given the scope and significance of their responsibilities.

The responsibility of developing an individual mentoring plan for each faculty member will be shared by the individual faculty member, the mentor(s), the mentoring champion, the Department Chair, and the Division Chief. There are generally three mentoring situations; dyadic (one on one), mentoring teams, and peer mentoring.

The traditional model of a mentoring program is the dyadic, one-on-one mentor-mentee relationship. A successful mentoring plan provides guidance in several different areas including: advice in area of focus (e.g., research, teaching, clinical care); professional development, which should include an active role for the mentor in promoting the career of the mentee (e.g., suggesting role for mentee on a grant review panel or scientific writing committee, introducing the mentee to leading experts in the field, etc.); monitoring the progress of the mentee; helping to ensure academic promotion of the mentee at MUSC; academic career guidance; and psychosocial support.

The traditional model of one-on-one mentoring may not be effective for each faculty member and a team approach to mentoring may be more effective. **Typically this team would consist of a scholarly mentor who is an expert in the scientific or scholarly area of the mentee and a career mentor who is a senior**

faculty member who provides career guidance and support. Developing a mentoring team for a faculty member will be facilitated by the permanent-lead mentor, the mentoring champion, the Department Chair, and the Division Chief. Each team member will have important roles in helping the mentee develop an effective mentoring team. **Regardless of whether the mentee has a single mentor or a team of mentors, one mentor will be the permanent -lead mentor.** Ideally this will be a senior faculty member who will not be competing in any direct or indirect way for resources with the new recruit. This mentor will be familiar with the candidate's career plan, and needs of the recruit to be academically successful.

Alternatively, successful junior faculty often learn to rely on different mentors, including peers (peer mentoring). Mentoring through peers is a successful alternative to the dyadic mentoring model. The collective knowledge base and experience of the peers can be comparable to a senior colleague. (see references Kram K, 1985 and Moss J, 2008)

To ensure that each mentee – mentor relationship is an effective one and for each party to understand their commitments to that process, the Department will utilize a formal agreement between the mentee and each mentor. (See Appendix 1 for examples of agreements) The agreement form describes how they will work together and collaborate on the development of the goals and objectives, short and long term (individual specific), the working relationship and the commitment to the mentoring plan.

Meetings between the mentee and the career mentor should occur at least twice per year to review the mentee's updated curriculum vitae and Career Development Plan (CDP). An example of a CDP is provided in the Medicine E Value Mentoring System. The frequency of meetings between the mentee and the scholarly mentor are typically 1- 4 times per month to discuss the progress of research or scholarly activities, grant and manuscript preparations, facilitating networking, provide guidance on coursework and training opportunities.

5. Hiring of New Faculty and Initial Mentoring

Successful faculty development begins during the hiring phase of a new faculty

recruit. As such, departmental mentoring plans are in place with special emphasis on the process of hiring new faculty. In this regard, the Department of Pediatrics requires that once a decision is made to hire a new faculty candidate, a member of the department who met and interacted well with the recruit during the initial interview and who is willing to be the permanent mentor for the new recruit will be identified. If a permanent mentor is not available an interim mentor will be identified by the Division Chief and /or the Department Chair. An interim mentor may be chosen to be the permanent-lead mentor but this could change by mutual agreement of all parties if the faculty member identifies another willing potential mentor that might be better suited for the lead mentor role. ***The permanent or interim mentor will then work with the Division Chief and Department Chair, acting as an advocate for the new hire in the recruitment process.***

The permanent or interim mentor could assist the mentee with the following issues:

- faculty track and rank
- % effort for clinical activities including after-hours call % effort for teaching
- adequate protected time for research and teaching effort
- adequate support for administrative, clinical (e.g. nurse practitioner or physician assistant), and research efforts (e.g. research nurse, lab technician)
- development of a mentoring team. The mentor can help the recruit develop a mentoring team. This can start during the interview process by introducing the candidate to potential members of a mentoring team and continue once the new faculty member arrives.

The final offer letter from the Department Chair to the new hire should include specifics on each of the above items including identification of the interim mentor(s).

Attendance at a new faculty orientation session is compulsory for all new faculty within 1-3 months of arrival at MUSC.

Existing Faculty

All existing faculty at ranks lower than full professor should have a lead mentor

and possibly a mentoring team. If an existing faculty member does not have a mentor, the faculty member and the Department Chair should meet to discuss the assignment of an interim mentor. This interim mentor should have the same characteristics as those described for new faculty, i.e. well versed and experienced in the process of successful promotion, genuinely interested in the career development of the faculty and who would not be competing in any direct or indirect way for resources with the mentee. The interim mentor would then support the faculty member in formulating a career development plan and introduce the faculty member to other potential mentors that might be part of a mentoring team. A permanent mentor will be identified within 6 months. A meeting between the faculty member, lead mentor, and Chair should be arranged to discuss the resources that are needed for the faculty member to be successful. Many of the bullet items listed above for new faculty may have to be addressed to help with the professional development of the existing faculty member.

6. Evaluation of the Mentor-Mentee Relationship

To determine the success of each mentee – mentor relationship and the department mentoring plan, metrics need to be developed for measuring these criteria. The mentee and mentor in each relationship should be required to complete a confidential evaluation report at least annually which should be reviewed by the Department Chair. Examples of these surveys are provided in appendix 3. These forms would be completed annually.

Additionally there is now opportunity to use the E-Value system as developed by the Medicine Department. It is provisionally the plan of Pediatrics to adapt and adopt this evaluation strategy.

7. Metrics of Successful Mentoring

Other metrics that should be used to determine the effectiveness of the mentee – mentor relationship will depend on whether mentoring is related primarily to research, education, or clinical activities.

Research-related metrics for mentoring

- number of grants submitted by mentee under the mentor's guidance

- number of these grants funded
- number of original publications under the mentor's guidance
- importance of original publications under the mentor's guidance (e.g., impact factor, editorial written on paper)
- career development progress of mentee while guided by the mentor, e.g., presentation of research at national / international meetings, invited presentations at meetings or other universities, election to study sections or specialty societies, promotion of mentee
- research awards of mentee under the mentor's guidance

Teaching related metrics

- teaching accomplishments of mentee under mentor's guidance, e.g., formal courses taught, course materials developed, innovative teaching methods developed
- teaching evaluations
- number of students/residents/fellows
- pass rates of the national board examinations
- examples of patient and family teaching materials
- number of education publications under the mentor's guidance
- importance of education publications under the mentor's guidance (e.g., impact factor, editorial written on paper)
- number of education grants submitted by mentee under the mentor's guidance
- number of these grants funded
- career development progress of mentee while guided by the mentor, e.g., presentations at national / international meetings, invited presentations at meetings or other universities, membership in education committees in or outside of the institution, promotion of mentee
- honors and awards for teaching to the mentee under the mentor's guidance

Clinical related metrics for mentoring

- number of presentations at institutional, national, or international meetings by trainees (students, residents, and fellows) or junior clinical faculty under the mentor's guidance
- number of publications by trainees (students, residents, and fellows) or

- junior clinical faculty under the mentor's guidance
- innovative clinical care developed by junior faculty under mentor's guidance
 - career development progress of trainees and junior clinical faculty while guided by the mentor, e.g., graduation from clinical training program of trainees and subsequent positions, invitations to junior clinical faculty to present at meetings or other universities, junior faculty participating as members in clinical committees in or outside of the institution, promotion of junior clinical faculty
 - honors and awards for teaching to the junior faculty member under the mentor's guidance

Metrics to determine the overall effectiveness of the departmental mentoring plan should include:

- surveys of faculty on their satisfaction with the plan and their job overall
- attrition of faculty within the department, especially junior and mid-level faculty
- promotion of faculty within the department
- number of successful mid-career awards for trained mentors NIH (K05, K07, or K24 grants)
- number of career development awards of mentees (e.g., K23, K08, KL2)
- total funding from all mentored activities
- total number of publications overseen by mentors
- an external review of the mentoring program by a senior member of the College leadership designated by the Dean every 3-5 years.

Role of Chairs, Promotion Committees, and Deans

The Department Chair is ultimately responsible for ensuring that all faculty in the department are mentored successfully. This includes overseeing the development of a specific mentoring plan for the department and monitoring the effectiveness of the plan. The Chair should meet with each mentee at least annually to review the progress of the mentee and the effectiveness of the mentee – lead mentor relationship, and to ensure that areas of concentration facilitate the mentee’s successful career development and departmental strategic plan. The Chair may also suggest and facilitate a change of mentor(s) if the relationship is not deemed beneficial for either participant.

The department’s internal promotions committee should also review the mentee’s career development when necessary if the faculty member requests review or if the faculty is not progressing successfully. The committee should list what is missing in the faculty member’s portfolio for promotion, and make specific recommendations about how to achieve promotion to the Chair or Division Chief or faculty member directly.

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Additional resources:

UCSF Faculty Mentoring Program – Mentoring Facilitator Toolkit; Mitchell D Feldman, 2009

http://academicaffairs.ucsf.edu/ccfl/media/UCSF_Faculty_Mentoring_Program_Toolkit_2012.pdf

Framework for Departmental Mentoring and Career Development Plans for Faculty at the Medical University of South Carolina

Developed by the MUSC Mentor Leadership Council * August 2010

Appendix 1 **SAMPLE MENTORING PARTNERSHIP AGREEMENT #1**

We have agreed on the following goals and objectives as the focus of this mentoring relationship:

- to develop a dynamic reciprocal relationship fostering professional growth
- to work towards the development of a career development plan
- to introduce Protégé to best practices in academic medicine

We have discussed the process by which we will work together, develop, and, in that same spirit of partnership, collaborate on the development of a work plan. In order to ensure that our relationship is a mutually rewarding and satisfying experience for both of us, we agree to:

1. Meet regularly. Our specific schedule of contact and meetings, including additional meetings, is as follows:

2. Look for multiple opportunities and experiences to enhance the mentee’s learning. We have identified, and will commit to, the following specific opportunities and venues for learning:

3. Maintain confidentiality of our relationship. Confidentiality for us means the following:

4. Honor the ground rules we have developed for the relationship. Our ground rules will be:

5. Provide regular feedback to each other and evaluate progress. We will accomplish this by

Mentor’s Signature and Date

Mentee’s Signature and Date

Check box if you are lead mentor []

Source: Adapted from The Mentor’s Guide by Lois J. Zachary. 2000 © by Jossey-Bass, San Francisco, CA.

Appendix 1. SAMPLE MENTORING PARTNERSHIP AGREEMENT #2

- Mentor is primary scholarly mentor
 career mentor
 mentoring team member

Working in partnership, we are entering this mentoring relationship. It is our expectation that this partnership will foster professional growth and career development. In order to ensure that the mentoring relationship will be a mutually rewarding and satisfying experience, we agree to the following:

1. Maintain confidentiality in this relationship
2. We are committed to sustain this relationship for at least one (1) year from this date.

3. We are committed to meet together: weekly _____ monthly _____

Specific days/times (eg Tuesdays at 10am) _____

4. We have established the following goals for this mentoring relationship:

5. The skill areas to be enhanced or developed through this partnership are:

6. Each of us has outlined expectations for the mentoring relationship.

7. We have discussed and agree to this partnership agreement.

Mentor Date

Mentee Date

Appendix 2. Example of Career Development Plan (CDP) Prepared by Mentee

Instructions to Mentees:

Please complete this form every 6 months and give a copy to your career mentor before your mentoring session. Attach an updated CV in the recommended format.

Instructions to Mentors:

Please review the mentee's CV and this CDP prior to meeting your mentee.

Date:

Mentor Name:

Mentee Name:

Time allocation as estimated by Mentee:

_____ % Teaching/training/providing mentoring

_____ % Research

_____ % Patient Care

_____ % Administration

_____ % Other Creative Professional Activity

How (if at all) would you like to change this time distribution and how could you justify that change?

Academic Appointment

Do you understand the expectations for your career advancement and promotion

within the University?

Yes

No

If no, provide questions you have about career advancement and promotion at the University:

Current Professional Responsibilities

List your major professional responsibilities and if you anticipate significant changes in the coming year.

Future Professional Goals

Short Term Goals

List your professional goals for the coming year. Indicate how you will assess if the goal was accomplished (expected outcome)

1. Goal:

Expected outcome:

2. Goal:

Expected outcome:

3. Goal:

Expected Outcome:

Long Term Goals

List your professional goals for the next 3 to 5 years. Indicate how you will assess if the goal was accomplished.

1. Goal:

Expected outcome:

2. Goal:

Expected outcome:

3. Goal:

Expected Outcome:

Are you satisfied with your personal-professional balance? If not—what are your plans for modifying how you spend your time?

Adapted from UCSF Faculty Mentoring Program

http://academicaffairs.ucsf.edu/ccfl/media/UCSF_Faculty_Mentoring_Program_To_olkit_2012.pdf

Appendix 3. Mentor/Mentee relationship evaluation.

Part 1. TO BE COMPLETED BY MENTEE.

Mentee: _____

Mentor: _____

ITEM	Excellent	Fair	Poor		
1. The mentor is available on a regular basis and approachable.	1	2	3	4	5
2. The mentor helps define goals	1	2	3	4	5
3. The mentor has respect for the mentee	1	2	3	4	5
4. The mentee has respect for the mentor	1	2	3	4	5
5. The mentor is an appropriate role model for the mentee	1	2	3	4	5
6. The mentor has a good understanding of the challenges presented to the mentee.	1	2	3	4	5
7. The mentor has been helpful in guiding the mentee through the challenges presented	1	2	3	4	5
8. The mentor provides both support and constructive criticism of the mentee.	1	2	3	4	5
9. The mentee Maintains a portfolio of publications, lectures, clinical development, faculty/university service for periodic review with mentor(s) and annual review with Chair	1	2	3	4	5

Appendix 3. Mentor/Mentee relationship evaluation.

Part 2. TO BE FILLED OUT BY MENTOR.

Mentee: _____

Mentor: _____ Check box if you are lead mentor_ []

ITEM	Excellent	Fair	Poor		
1. The mentee is available on a regular basis and approachable.	1	2	3	4	5
2. The mentee has developed a reasonable set of goals	1	2	3	4	5
3. The mentor has respect for the mentee	1	2	3	4	5
4. The mentee has respect for the mentor	1	2	3	4	5
5. The mentee exhibits understanding of the requirements, policies, and procedures for promotion and tenure	1	2	3	4	5
6. The mentee has a good understanding of the challenges presented to the mentee.	1	2	3	4	5
7. The mentee has developed established relationship(s) with a mentor(s) in the areas of teaching, research, clinical service, and faculty development	1	2	3	4	5
8. The mentee takes criticism/suggestions from the mentor and reacts appropriately	1	2	3	4	5

Appendix 4

Faculty Survey 2010 – Department of Pediatrics

During the fall of 2010, the Faculty Development Initiative developed a seven page survey (using Survey Monkey) to poll our faculty on their opinions and understanding of the faculty mentoring and faculty advancement strategies in the Department of Pediatrics.

We received a response from 64 faculty members. When summarizing the data there were frequently cells with small sizes. As such, caution is warranted when extrapolating those in summary statistics.

	Instructor	Assistant	Associate	Full
Academic Clinicians	1	8	3	9
Clinician Educators	3	19	11	6
Academic Educators	0	1	0	1
Academic Investigators	0	1	0	0

When asked if they were confident in their understanding and expectations for advancement, approximately 11% were not confident; 44% were somewhat confident; and 44% were confident. The differences in confidence by faculty rank or faculty track were subtle. Assistant professors were generally less confident as compared to Associate or Full professors. Clinician educators were slightly less confident than Academic clinicians. Those without mentors were generally less confident as compared to those with mentors.

Approximately 67% of academic clinicians reported having mentors as compared to only 31% of clinician educators. Approximately 48% of Assistant professors reported having a mentor as compared to 29% for Associate professors.

Approximately 25% of respondents felt that young faculty were not able to find good role models. Even among those with an identified mentor, approximately 35% felt that finding good role models was not possible.

Among those on tenure track, 42% had a mentor as compared to only 29% for those not on tenure track. Almost 19% did not know if they were or were not on a tenure track.

While the collegiality among faculty was high (82%), 25% were very dissatisfied with mentoring. Among those who were dissatisfied, almost 100% were without mentors.

There are interesting trends within the data with respect to our faculty responses to mentoring and advancement. With no formal mentoring program in the Department, it is interesting that approximately 44% of respondents felt that they had a mentor – although the roles and responsibilities of the mentor/mentee relationship have not yet been defined. Perhaps this is one reason 59% of those with a mentor felt the relationship was not positive.

Summary: The data seem to indicate a complex environment within the Department that has a very collegial faculty but who have not fully or formally addressed mentoring and advancement among the faculty. There are pockets of positive experiences, but there is a pervading theme that mentoring is all too often absent and not always positive (due to a lack of a formal mentoring plan). While assistant professors appear to have a better understanding of advancement, those at the associate level seem to have been left to their own resources. Among the tracks, clinician educators, in particular, seem to have less experience with mentoring and guidance for future advancement.

It would appear that a formal mentoring program – along with formal guidance for faculty development – is critical to improving these findings.

Results provided by analysis Thomas Hulsey, PhD

Appendix 5. Institutional, State and National Resources for Supporting Faculty Development at MUSC

1. Institutional Resources

1.1 Research Support

There are a number of institutional resources that support clinical, translational, and basic science research. These are listed on the MUSC Research and Discovery website (<http://research.musc.edu/index.html>). Some of these resources are described below:

- **The South Carolina Translational Research (SCTR) Institute.** The recently NIH funded MUSC Clinical Translational Science Award (CTSA) that is called the South Carolina Translational Research (SCTR) Institute (<http://sctr.musc.edu/>) provides research support to investigators across campus. Within SCTR is the **SUCCESS Center** which provides research navigation support such as collaborator and mentor matching and links to institutional cores and programs. Additionally, the SUCCESS center (<https://sctr.musc.edu/index.php/programs/success-center>) provides consultation for regulatory submissions and study subject recruitment, lists studies on clinical trials registry, and helps with grant budget development. At SCTR there is a toolkit that can help the most inexperienced investigator navigate the process required to get clinical trials underway and much more. MAP-R is a web portal that identifies approvals needed for all types of grant submissions Visit https://sctrweb2.musc.edu/research_toolkit to find a wealth of information and pertinent advice about research at MUSC.
- **Funding Opportunities** are available through the KL2 and Pilot Project Program of SCTR and the University Research Committee.
<https://sctr.musc.edu/index.php/education/k12>
<https://sctr.musc.edu/index.php/programs/pilot-projects>
<http://research.musc.edu/urc/home.htm>
- **SCTR Vouchers** can be requested for up to \$1,000 for research services and supplies per approved protocol every six months. Investigators are limited to two active vouchers in any one six month period as long as they are for two different protocols. For more information please visit <https://sctr.musc.edu/index.php/voucher>.

If you think that applying for a SCTR Voucher could be beneficial to your research study, please visit <http://sctr.musc.edu> and fill out a Service Request Form. The SUCCESS Center staff reviews all voucher requests and a decision of award is made within two business days of application.

- **The Office of Research Development (ORD)** (<http://research.musc.edu/ord/index.html>), which is funded through the Vice President for Academic Affairs & Provost's Office, focuses on program and proposal development, identifies funding opportunities, develops proposal concepts, networks faculty members with complementary interests, provides grant-writing consultation and workshops, offers pre-submission critiques, compiles institutional data, and prepares competitive proposals for research resources and research training. New faculty and trainees are encouraged to visit the office in 101 Basic Science Bldg to meet the ORD staff and learn about networking opportunities. The following are among the services offered by the Office of Research Development:

Research Project Grant (RPG) Retreats are held approximately 3 times / yr. These interactive half-day sessions give individual investigators the opportunity to gain constructive criticism on a specific research concept or proposal. Researchers at any phase of career development are encouraged to present or attend.

ORD Alerts mailing list is a service for MUSC faculty and trainees to receive research news and funding opportunities by email (<http://research.musc.edu/ordalerts.html>.)

Community of Science (COS) is an external web-based system, offered as an institutional subscription service, that provides a range of services including searchable databases for funding opportunities and expertise, as well as a personalized workbench from which to access and manage COS services.

Institutional "Boilerplate" is a compilation of information about MUSC, its components and programs, primarily used to assist MUSC faculty, staff, and trainees in preparing institutional resources and environment sections for research grant and contract proposals.

Grantsmanship Workshops are held twice per year. Led by an external consultant, the workshop content focuses on the NIH organization, peer review system, grantsmanship tips, and the ABCs of an R01 or other NIH grant application. Individual and team consultations are also offered. The workshops and consultation opportunities are an institutional research support service, provided at no charge to investigators or programs.

MyPeerReview is an internal, on-line searchable database of information about MUSC faculty service on review panels and study sections for the NIH and other federal and non-federal sponsors, as well as journals for which MUSC faculty members have served or currently serve as an ad hoc reviewer, member, editorial board, etc.

- **Grant Writing Help** is provided by: i. The Office of Scientific Editing and Publications (OSEP) which provides support to augment manuscript and grant writing skills for MUSC faculty, trainees, and staff <http://research.musc.edu/APR/OSEP.html>, and ii. through the SUCCESS center <https://sctr.musc.edu/index.php/programs/success-center>.

- **Grant Administrative Support.** The Office of Research and Sponsored Programs (ORSP) and Office of Grants and Contracts Accounting (OGCA) provide the fundamental support need to obtain and manage sponsor-supported research funding. In addition to individual support, their websites provide important information regarding basic information needed for submission, and management of grants and contracts.
 - Office of Research and Sponsored Programs
(<http://research.musc.edu/orsp/index.html>)
 - Office of Grants and Contracts Accounting
(<http://academicDepartments.musc.edu/vpfa/finance/gca/index.htm>)

Some Specific Resources for Clinical and Translational Research:

- **Clinical & Translational Research Center (CTRC).** The primary purpose of the CTRC is to support clinical and translational research projects within the institution and SCTR affiliate members as well as pilot studies that may lead to future NIH or other sources of peer-reviewed clinical/translational research grant support. The specialized staff of the CTRC consists of research nurses, laboratory personnel, nutritionists, IT specialists, and professional/administrative personnel. A core laboratory, fully-equipped outpatient clinic, dental suite, and imaging suite comprise the highly-technical physical facilities that are on hand to support your research.
<https://sctr.musc.edu/index.php/programs/clinical-a-translational-research-center>

- **Biostatistics Consultation** through the SCTR Biostatistics & Epidemiology Program. Services offered are:
 - Biostatistical Education: Consultation and assistance in understanding one or more biostatistical concepts
 - Methodology/Study Design: Guidance with selecting an appropriate study design or developing a statistical analysis plan
 - Power Analysis / Sample Size Calculation: Assistance with determining the statistical power or sample size required for a proposed study
 - Data Analysis: Assistance with analyzing data collected for a research study
 - Other: (e.g. help with presentations, manuscripts, etc.)

These services are offered for several different settings:

Assistance Preparing Grants (Federal, Foundation, Other)

Assistance Preparing CTRC Protocols

Assistance with Current CTRC Funded Project

Unfunded Research Project (e.g. Abstract/Manuscript Preparation)

Links to these services are <http://sctr.musc.edu/index.php/programs/biostats> and http://sctrweb2.musc.edu/research_toolkit/preaward/grantproposal/statistic

- **Master of Science in Clinical Research Program (MSCR)** degree is offered by MUSC. This program teaches core competencies in clinical research methods, fosters development of a sustainable research focus, and provides the participant with the

skills to compete for extramural support.

<https://sctr.musc.edu/index.php/education/mscr-masters-of-science-in-clinical-research>

- **Society of Clinical Research and Translational Early Scientists (SOCRATES)** provides a forum for junior faculty to present their research projects in front of peers, senior researchers and statisticians, foster collaboration across multiple subspecialties at MUSC, and trouble shoot about ways to improve mentoring across campus
<https://sctr.musc.edu/index.php/programs/teach/133>

Some Specific Resources for Basic Science Research:

- **Research Support** (<http://research.musc.edu/researchresources.html>)
 - Shared Core Facilities. A number of core facilities are available to support basic research (see information of each of these facilities in Research Shared Facilities on this website). In addition, an annual EXPOSITION of these facilities that enables meetings with core personnel occurs in the Fall each year.
 - College of Graduate Studies (CGS) Office of Postdoctoral Affairs. In addition to providing useful information regarding practical aspects of hiring and mentoring postdoctoral scientists, the office also offers services to enable recruitment of postdoctoral scientists.
- **Responsible Conduct of Research (RCR).**
 - CGS RCR Retreat resources. All MUSC postdocs participate in a mandatory 2-day retreat focused on career development, conflict resolution, and compliance issues related to the responsible research practices. All lectures and handouts are available on the CGS website. (<http://www.musc.edu/grad/postdoc/rcr.html>)
 - The HHS Office of Research Integrity website has a wealth of educational resources on RCR practices with case scenarios, videos and tutorials for all stages of research professionals (<http://ori.dhhs.gov>)
- **Personnel/Trainees Relationships**
 - College of Graduate Studies (<http://www.musc.edu/grad/>)
 - Graduate Faculty Resources – application for appointment to graduate faculty and conflict of interest forms.
 - Mentoring Compact – AAMC recommendations for mentoring graduate students and postdocs (<http://www.aamc.org/research/postdoccompact>).
 - Graduate Council Minutes – record of monthly meetings and policy discussions.
 - Graduate Faculty Research – web-based database of faculty research interests to aid students looking for potential mentors.

- Training Grants – listing of MUSC training grants and career development programs for graduate students and postdocs.
 - Student Handbook – specifics of graduate programs, resources, dissertation requirement, and CGS policies.
 - Summer Research Programs for Undergraduates and Health Professional Students. These programs provide students the opportunity of a 10-week long internship with MUSC faculty. (<http://www.musc.edu/grad/summer/index.html>)
 - Howard Hughes Medical Institute
 - “Lab Management: Making the Right Moves” is an essential resource for postdocs and faculty, available free on-line. (<http://www.hhmi.org/resources/labmanagement/moves.html>)
 - “Entering Mentoring” provides guidance in mentoring individuals with diverse learning and personality styles. (<http://www.hhmi.org/catalog/main?action=product&itemId=272>)
 - Human Resources Career Development Courses and Seminars. MUSC HR provides a variety of professional development workshops and seminars to facilitate more effective lab management and hiring practices. (<http://academicDepartments.musc.edu/vpfa/hrm/training/trainingpage>)
 - International Scientific Presenters Toastmasters. This club provides a supportive environment for learning how to give effective scientific presentations, and benefit from constructive feedback of peers and faculty sponsors. (<http://scientific.freetoasthost.us>)
 - CGS725 Teaching Techniques. This course is offered every Fall and Spring semester and is open to all students and postdocs. Contact the College of Graduate Studies office for registration information (weised@musc.edu)
- **Networking Opportunities**
 - “B & BS” (halushpv@musc.edu). The B & BS club provides an informal forum for faculty, postdoctoral and graduate students to present their research ideas, grant proposals or research problems to a mixed audience that can provide useful feedback and often potential collaborations or exchange of reagents
 - MUSC Core Facilities “Octoberfest” Reception. This is an annual event for core facility directors to highlight the services available.
 - Research INKlings (<http://research.musc.edu/inklings.html>). INKlings is a monthly on-line news letter of recent events of interest to MUSC researchers.
 - SACNAS promotes a diverse research academy by providing workshops and networking opportunities that encourage Chicano/Hispanic and Native American students and postdocs to pursue and persist in STEM fields. This is also an excellent recruitment resource. (<http://www.sacnas.org/>)
 - ABRCMS is an annual conference that brings underrepresented minority students and postdocs together to present their research in an environment that encourages their development into future STEM faculty. This is also an excellent recruitment venue. (<http://www.abrcms.org/index.html>)

- www.MinorityPostdoc.org hosts a variety of career development resources for postdocs, including job listings and articles, with an emphasis on minority scholars.

1.2 Resources for Education

1.2.1. Types of Educational Technology

- a. Tegrity - Tegrity is a lecture capture service that lets faculty automatically capture every class – on and off campus – for later review by every student, anytime, anywhere. <http://tegrity.musc.edu>
- b. Adobe Connect - Adobe Connect is a Web conferencing software that securely shares presentations and multimedia right from a desktop computer, supporting feedback from hundreds of participants — all using a web browser and the Adobe Flash® Player runtime. <http://connect.musc.edu>
- c. WebCT - WebCT is MUSC's current Learning Management System. A Learning Management System is a software package that enables the management and delivery of learning content and resources to students. <http://webct.musc.edu>

1.2.2 Education Technology Services (ETS) Provides support in the areas of digital imaging, audio visual support in centrally scheduled classrooms and distance education technologies, and video production.

1.2.3. Apple Tree Society - The Apple Tree Society exists to foster dialogue and activity related to the scholarship of health professions teaching through campus and national partnerships. <http://www2.edserv.musc.edu/appletree/>

The following are the goals of the Society:

- Expand the faculty development opportunities related to teaching on campus.
- Initiate programs that recognize and enhance the value of teaching as a scholarly activity.
- Explore and support innovative methods and technologies for teaching and learning.
- Promote professional development of current and future educators.

Activities of the Society include:

- Monthly Brown Bags – noontime sessions on topics related to the Scholarship of teaching
- Workshops focused on development of teaching skills including lecture and presentation skills, case based discussions, evaluating learners, and using technology such as WebCT (see below)
- Collegiality – informal meetings to discuss teaching and learning

1.2.4. Copyright Toolkit - Understanding and complying with the laws governing the use of copyrighted materials is daunting. The information on this site is directed

at teaching faculty, students, scientific writers, researchers, and others at MUSC who use copyrighted works. It includes Copyright @ MUSC: Policies, Forms, & Resources, forms, and information about Coursepacks, Plagiarism and How to Cite Sources, releases, Images and text, and print and digital/online resources. Many of the links lead to the excellent copyright Websites of other universities. <http://copyright.library.musc.edu/page.php?id=1314>

- 1.2.5. Creating Collaborative Care/Interprofessional Education** - Creating Collaborative Care (C3) is a Quality Enhancement Plan (QEP) for the Medical University of South Carolina that focuses on inter-professional education. <http://academicDepartments.musc.edu/c3/>
- 1.2.6. Faculty teaching awards** (College and University) - In recognition of faculty accomplishments the individual colleges, as well as the university, present annual awards in teaching, research, and service. These awards are very competitive underscoring the excellence of the faculty with respect to their achievements. The awards are sponsored by various groups. The university annual awards include:
- Developing Scholar Awards
 - Outstanding Clinician Awards
 - Teaching Excellence Awards (Developing Teacher, Educator-Lecturer, Educator-Mentor)
 - Distinguished Faculty Service Awards
- 1.2.7. Library resources** - <http://www.library.musc.edu/>
- a. Computer labs – 4 computer labs are available for use by faculty for their classes. The labs host an average of 25 iMac computers that support the use of both Windows and Macintosh operating systems
 - b. Learning Commons – An initiative of the MUSC library currently under development designed to provide spaces for study and socialization and access to the latest technologies for teaching and learning.
 - c. Center for Academic and Research Computing – Works with faculty and staff across the campus to design, develop and support interactive instructional programs.
 - d. Journals The library currently provides access to approximately 17,498 e-journals and 34 current print-only subscriptions <http://muscls.musc.edu/>
- 1.2.8. Center for Academic Excellence** - The CAE is dedicated to improving learning and teaching on campus. Health care providers must learn and re-learn in order to adapt their practices to the latest advances in biomedical science. They also must collaborate with colleagues across professions to provide quality care and conduct groundbreaking research. That’s why the CAE provides collaborative learning groups; and the effectiveness of these groups is why a majority of MUSC students choose to participate—in addition to their scheduled class time.

Another vital part of the work of the CAE is teaching the material and the strategies necessary for success on national and state licensing board/certifying exams. Under the tutelage of CAE faculty and their fellow students, students approach these rigorous exams with confidence and exceed national performance averages. <http://www.musc.edu/cae/>

1.2.9. The Writing Center - The Writing Center faculty members teach students to communicate effectively with their professors, their fellow students, and their patients. <http://www.musc.edu/writingcenter/>

1.2.10. Enrollment Services - Enrollment Services oversees student admissions, records and financial aid. <http://www.musc.edu/em>

2. State or National Resources

2.1. Funding Agencies

By going to the MUSC Research and Discovery website (<http://research.musc.edu/researchresources.html>) and clicking on Funding Opportunities under the Office of Research Development, information on the following opportunities is available:

- Funding alerts
- Federal and state funding opportunities
- Sponsor opportunities (Corporate and Foundations)
- New Investigator Funding Opportunities
http://research.musc.edu/newinv_fund.html
- Postdoctoral Funding Opportunities
- Limited Submissions Competitions Opportunities

2.2. Associations

- **Association of American Medical Colleges (AAMC)**. The AAMC represents all 133 accredited U.S. medical schools; approximately 400 major teaching hospitals and health systems, including 68 Department of Veterans Affairs medical centers; and nearly 90 academic and scientific societies. Through these institutions and organizations, the AAMC represents 125,000 faculty members, 75,000 medical students, and 106,000 resident physicians. Through its many programs and services, the AAMC strengthens the world's most advanced medical care by

supporting the entire spectrum of education, research, and patient care activities conducted by member institutions. <http://www.aamc.org/>

- **Association of Women in Science (AWIS)** is a national advocacy organization championing the interests of women in science across all disciplines and employment sectors. By breaking down barriers and creating opportunities, AWIS strives to ensure that women in these fields can achieve their full potential. <http://www.awis.org/>
- **National Postdoctoral Association.** The NPA provides many resources useful for enriching the research environment, managing a research lab, and expectations of mentors and trainees. MUSC is an affiliate institution which provides membership to all faculty, postdocs, and students. <http://www.nationalpostdoc.org/>